

**Support for the Amendment:**

The specification has been amended to identify that the spray opening 110 may be oblong. No new matter has been added. Support for the amendment can be found in originally submitted claim 2, at lines 32-33 on page 4 of the specification and at FIGS. 1-3.

Claim 1 has been amended only for the purposes of incorporating the subject matter of claim 2 which is now cancelled. No new matter has been added as the literal language of claim 2 has been used in amended claim 1. For the Examiners reference, support for this language, directed to a spray opening that is oblong which gives a flat spray, can be found at FIGS. 2-3 of the drawings and at lines 12-16 on page 3 and at lines 32-33 on page 4.

Claim 2 has been cancelled.

Claim 6 has been amended only for the purposes of correcting a typographical error. No new matter has been added.

Entry of the amendment is requested. Upon entry, claims 1 and 3-9 are active in this application.

## REMARKS

The Office Action mailed July 8, 2008 contains several rejections to a single prior art reference, each of which is discussed in turn.

### 35 U.S.C. § 102(b) rejection over Pettit et al. (U.S. Patent 6,293,476 B1)

Claims 1-3 and 6 are rejected under 35 U.S.C. § 102(b) as being anticipated by Pettit et al. This rejection is traversed.

Claim 1 has been amended to incorporate the subject matter of claim 2. As such, amended claim 1 currently specifies: "a spray nozzle for spraying fountain solution or the like on a roll in a printing machine, the spray nozzle comprising a spray opening at a base plateau at a front end of the spray nozzle, comprising the spray opening opens on a protrusion protruding from the base plateau in the spray direction of the nozzle, wherein the spray opening is oblong, and hence gives a flat spray."

Pettit et al. discloses an HVLP spray gun air cap (FIGS. 1-3) including an axial passage with a round cap opening (12) and air horns (20, 30) having orifices (22, 24, 32, 34) from which air jets are directed to converge upon the diverging atomized spray emitted from the cap opening (12) to form a generally flattened spray pattern. Pettit et al. additionally discloses opposing and diverging air passages (40, 50) located within the outer side (14) of the cap opening (12). These passages have corresponding orifices (41, 51) which increase the width of the spray pattern and reduce the spray density at opposite end portions thereof.

Pettit et al. does not anticipate claim 1 for at least the following reasons. First, the air cap opening (12) disclosed in Pettit et al., best viewed at FIG. 1, is completely round. Because claim 1 specifies a spray opening which is oblong, Pettit et al. fails to disclose the invention as claimed. Second, the air cap opening (12) of Pettit et al. does not itself create a flat spray, as specified in claim 1. Instead, the air cap (FIG. 2) of Pettit et al. relies upon air jets formed by orifices (22, 24, 32, 34) in air horns (20, 30) and the diverging air passages (40, 50) to shape the conical spray pattern emitting from the air cap opening (12) into a flat spray. Thus, Pettit et al. fails to disclose any spray opening which gives a flat spray and therefore does not anticipate the invention as claimed. For at least the foregoing reasons, Pettit et al. does not anticipate claim 1 and by extension dependent claims 3-9. Withdrawal of the rejection is requested.

35 U.S.C. § 103(a) rejection over Petit et al.

Claims 4, 5 and 7-9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Pettit et al. Claims 4, 5 and 7-9 depend from claim 1 which has been described above as has the relevant features in Petit et al. The rejection is traversed. Claim 1 is not obvious over Petit et al. for at least the following reasons.

First, Petit et al. makes no suggestion or teaching to provide a spray nozzle in which the spray opening is oblong, as specified in claim 1. Rather, Petit et al. teaches the use of air jets emitting from air horns (20, 30) and opposing air passages (40, 50) to shape a conical spray emitting from an air cap opening (12) into a flat spray pattern. As such, there would be no reason to modify the air cap opening (12) Petit et al. to be oblong because a flat spray is achieved by means other than the air cap opening (12). Further, Petit et al. makes no teaching whatsoever that the use of an oblong spray opening in combination with the air jets from the air horns (20, 30) and opposing air passages (40, 50) would result in a successful fan spray pattern. For at least this reasoning, Petit et al. fails to teach the invention, as specified in claim 1.

Second, one skilled in the art of fountain solution printing would not have considered the teachings of Petit et al. because an inoperable result would occur. The air cap disclosed in Petit et al. is for an HVLP type nozzle which uses high velocity air for shaping and breaking droplets of a conically shaped spray having large spray droplets. However, as is well known by persons skilled in the art of printing, it is desired to spray droplets having a relatively large size for applying fountain solution. This is so because if the droplets are too small, the spray droplets will have difficulties penetrating the boundary layer between the air on the roll onto which the fountain solution is being sprayed and the outside boundary layer. Resultantly, the droplets which are too small will accumulate and spread at the printing site. As such, incorporation of the teachings provided in Petit et al. would destroy the primary teaching of the claimed invention which is a workable spray nozzle for spraying fountain solution or the like.

For at least the foregoing reasons, claim 1 is not obvious over Petit et al. Because claims 3-9 depend from claim 1, they are patentable for the same reasons already stated in support of claim 1. Withdrawal of the rejection is requested.

**SUMMARY**

In view of the above amendments and remarks, Applicant respectfully requests a Notice of Allowance. If the Examiner believes a telephone conference would advance the

prosecution of this application, the Examiner is invited to telephone the undersigned at the below-listed telephone number.

Respectfully submitted,



Date: October 1, 2008

MERCHANT & GOULD P.C.  
P.O. Box 2903  
Minneapolis, Minnesota 55402-0903  
(612) 332-5300

A handwritten signature of Dennis R. Daley.

Dennis R. Daley  
Reg. No. 34,994  
DRD/TPJ/cjc